pepper in Kerala is decreasing because the farmers are not getting adequate support price from the Government and they are not getting good price in the market. The hon. Members have shown their anguish because the farmers are suffering. As far as rubber is concerned, the quality of rubber produced in India is better than the rubber being imported from abroad. As a result of this competition, prices of our rubber are going down. This is the issue which has been raised by the hon. Members. Sir, the Cardamom Board is there.

MR. CHAIRMAN: I will request the hon. Minister to also invite you in that meeting. ...*(Interruptions)*...

SHRI V. NARAYANASAMY: Sir, my question is this. Before holding that meeting will the Minister increase the support price? ...*(Interruptions)*... Sir, the cabinet minister is capable of replying. But, why can't the Minister of State present here reply to my point ...*(Interruptions)*... He is also capable of answering my question. ...*(Interruptions)*...

MR. CHAIRMAN. Please take your seat ...*(Interruptions)*... please take your seat ...*(Interruptions)*...

SHRI DIPANKAR MUKHERJEE: Yes, he is also a very competent person. ...*(Interruptions)*...

MR. CHAIRMAN: Please take your seat Next question. Shri R.K. Anand.

Availability of **skilled Engineers for IAF Aircrafts**

*62. SHRI R.K. ANAND:tt
SHRI SANTOSH BAGRODIA:

Will the Minister of DEFENCE be pleased to state:

(a) whether it is a fact that a recent study by Indian Air Force has attributed poor maintenance and technical flaws as major factors for air crashes;

(b) whether the country have sufficient availability of highly skilled aeronautical engineers to manufacture and maintain wide spectrum of aircrafts with IAF;

(c) whether the standard of training and skill match the increasing requirements of the Indian Air Force;

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††The question was actually asked on the floor of the House by Shri R.K. Anand.

(d) which are the engineering institutions that teach and train aeronautical engineers;

(e) whether Government propose to build an institution for aeronautical engineering to meet the demands for building and maintenance of IAF aircrafts; and

(f) if so, the details thereof?

THE MINISTER OF DEFENCE (SHRI PRANAB MUKHERJEE): (a) to (f) A Statement is laid on the Table of the House.

(a) to (f) An Expert Committee was constituted by the Government on 30th December, 2004 to identify the causes of aircraft accidents in the Indian Air Force (IAF) and to recommend remedial measures. The Committee in its analysis did not attribute any aircraft accident to poor maintenance. However, a number of accidents were attributed to technical defects like failure of components or systems, material failure, system malfunction and design deficiency.

At present the manpower of engineers and airmen is adequate for the lAF's commitments.

The IAF follows a well-structured training programme to ensure that its maintenance personnel are fully competent to carry out tasks assigned to them; for this purpose, the IAF inducts engineers on the basis of merit, from various Engineering Colleges in the country. Thereafter training is imparted at the Air Force Technical College (AFTC), Bangalore before sending them for training on various types of aircraft at different training schools of the IAF.

Modernisation and upgradation of necessary infrastructure for better maintenance of IAF aircraft is a continuous process •

SHRI R.K. ANAND: Mr. Chairman, Sir, so far, India has lost nearly 150 MiG-21. We have lost about 200-odd pilots. During 2002 alone, we lost about 17 aircraft. The loss to the exchequer is to the extent of Rs. 15,000 crores, in terms of loss of aircraft, and Rs. 8,000 crores in terms of cost of training. I would like to know from the hon. Minister two things. Is it correct that the human error caused 42 per cent of the crashes, and 44 per cent crashes were due to technical malfunctioning? This is number one. Secondly, is it correct that certified quality of spares imported from Russia

were being re-exported to Algeria and Vietnam by the HAL, while the IAF was being supplied cheap and uncertified spares picked up from Eastern Europe and the CIS countries? On the other hand, the Russian Aircraft Corporation have been denied access to the investigation into the cause of crashes.

SHRI PRANAB MUKHERJEE: Sir, so far as the ratio of accidents is concerned, I would kike to say that an Expert Committee was appointed in December, 2004 and it submitted its Report in May, 2005. As per that Expert Committee's recommendation, human error is practically of two categories; one, human error of the crew, including pilots accounted for 43 per cent, and human error in servicing accounted for four per cent. So, taken together, human error accounted for 47 per cent; technical defects, 39 per cent; bird-hit, four per cent and about 10 per cent due to other reasons, even the Expert Committee could not find out those reasons. That is why it has been bracketed as 'other reasons'. The total number of aircraft we lost in accidents in the last ten years are 276. If we compare that with the previous ten years, then the rate of accients has come down. In the previous ten years, from 1985-86 to 1994-95, the total number of accidents was 370. In the last ten years, from 1995-96 to 2004-05, the total number of accidents is 276. But, reduction is not the satisfaction. A number of reasons are responsible for these accidents. Various expert committees have looked into it; they have made their recommendations, and we are looking into it.

The hon. Member raised a specific question that certain spares are being imported from Russsia and thereafter being re-exported to Algeria. I do not have any such information about that. If the hon. Member passes on this information to me, I will be happy to look into it.

SHRI R.K. ANAND: Sir, my second supplementary is this. Is it correct that the three Accident Investigation Committees, i.e., Air Marshal La-Fontaine Committee, Air Marshal Rathore Committee and the committee headed by none other than Dr. APJ Abdul Kalam -- our worthy President Committee have come to the same conclusion that deficiency in proper training is the primary reason for these accidents? Secondly, will the Government make these reports public so that the people should know why we lost more than Rs. 23,000 crores in these accidents.? Sir, it is true that a number of Committees have been appointed, including the

Ahluwalia Committee, which is the latest one, and this is the fourth one. There is no denial of the fact that there are certain deficiencies and when we talk of the human error and when we talk of the technical defects, in both these categories there is an element of lack of training. But the hon. Member would appreciate that avionic industry like any other industry is having massive technological changes that are taking place. So, we are to keep pace with it. Therefore, what we are trying to do is to take all the recommendations for improving the training and other things and we are taking those measures in this regard. One of the major reasons why our training is a little deficinet is the non-availability of the adequate trainer aircraft and also the number of trainers, experienced trainers. The third problem is that the Indian Air Force is one of the air forces where there are a large number of categories of aircraft in the inventory and some of them are almost a vintage. For instance, MiG-21, we started procuring in 1963-64 and some of them are used in operation. One simple answer could be that we can just shelve them. In that case the required number of flying hours for the trainers for the training would not be available if the aircraft is not there. So, these are the contradictory positions that we are trying to reconcile. I share the concern of the hon. Member and of the House and that is why we have taken various measures.

श्री संतोष बागड़ोदिया : सर, मेरा भी एक सवाल है ।

श्री सभापति : आपका भी है । इतना बढ़िया जवाब मिल गया, अब और क्या पूछना बाकी है ?

श्री संतोष बागड़ोदिया : मैं दूसरी बात कहूंगा । अगर मैं कुछ ऐसा बोलूं जो आपको नही जमे, तो आप मेरे सवाल को रिजेक्ट कर दीजिएगा ।

श्री सभापति : नहीं, आप बोलिए ।

SHRI SANTOSH BAGRODIA: Sir, the point is that it is one thing if a pilot dies in war he becomes a martyr. But when a pilot dies because of the poor maintenance, because of the fault of the engineers, not only do we lose a pilot, the family loses the son or the husband but this family of the pilot is not recognised at all. It is, therefore, very important that maintenance is done very well. What steps the Government is taking to ensure that there is zero per cent tolerance because 39 per cent of it is because of the engineers' fault? That is a very large percentage. How can we prevent that?

MR. CHAIRMAN: What is your question?

SHRI SANTOSH BAGRODIA: Sir, this is the question. What steps are being taken?

MR. CHAIRMAN: Please come to the question straight.

SHRI SANTOSH BAGRODIA: All right. The other question is whether the IAF is having only 30 combat squadrons as against 39 combat squadrons. When you compare it with US or EU, what are the kinds of accidents and what is the percentage?

SHRI PRANAB MUKHERJEE: Sir, so far as international standard is concerned, we are on par. Of course, USA's rate of accident is less as compared to ours and many other countries. That is why I have given the figures. It is gradually coming down and we are improving. In respect of the number of squadrons and other things, I do not think we should share this type of information. There are certain things in the Defence, which should be considered as classified. Moreover, the threat percept for which you require your equipment platform system is not in isolation. It is in the context of the geo-political environment and security environment. Keeping that in view, whatever is needed is being taken care of. He has mentioned about 34 squadrons. Actually, we are having 36.5 though it is much less as compared to others.

SHRI B. J. PANDA: Sir, I am speaking both as an engineer and as a pilot. I compliment the hon. Minister for his candor in the answers he has given. With reference to this Committee Report about which he has said that it did not attribute any accident to poor maintenance and only four per cent to service related shortcomings. I would like to highlight for the Minister's information that in the Aviation Industry, both Civil Aviation as well as Defence, it is very common to use as a euphemism these terms of failure of components, failure of systems, material failure. The only aspect here, which is not commonly used as a euphemism, is design deficiency, which is attributable to the manufacturer. Sir, I would like to point out that sometimes these euphemisms are used to cover up certain lapses and maintenance and as you have yourself candidly admitted that if a very strict standard of maintenance is imposed and sometimes fleet availability will become substantially less. While appreciating your candor, Sir, I would ask an assurance from you to look into this aspect that it is unusual that no accidents are attributed to maintenance problems and whether you are doing internal benchmarking, which you just answered to a query put by Shri Santosh Bagrodia, in terms of component failure per thousand hours of flying. My suspicion is that you will find that it is not marginally less

than other countries but it could be substantially less. So, only one assurance I would like. I would like from you whether you would look into this and even at the cost of grounding more part of the fleet, would it establish higher standards of maintenance?

SHRI PRANAB MUKHERJEE: Surely, I will look into it. But, I do agree that these are the technical terminologies but we cannot help it. These terminologies are being used by the experts. By maintenance we mean from everything in the common parley but in the tehnical terms they are classified in different categories and we have to go by the technical experts in these areas. He himself being a technical person, he knows it. This is not merely to cover up anything because there is no question of covering up anybody because this is the national interest and as I am interested in securing the national interest, you are equally interested in securing the national interest. There are no two opinions on this. Therefore, there is nothing to hide in this area. A series of committees have been appointed. They have made suggestions. We have taken note of them, but, at the same time, I am repeating what I am saying that to maintain the flying hours, to have a total on a par with the developed countries, specially the USA, China or with France, the number of fleets which are to be available to us is simply not available because of constraints in other areas which we have. Taking all these factors into account, we are trying to resolve this issue.

SHRI VASANT CHAVAN: Sir, here it is mentioned that it is though not due to maintenance but it is due to technical defect and design deficiencies. Sir, through you, I want to ask the hon. Minister why these technical defects could not be identified before any accidents took place and having many flights. Even after having many flights some planes might crash. So these technical defects were not notified by that time. And design deficiency is a manufacturing deficiency. So, who is responsible for purchasing such things which are having deficiencies?

SHRI PRANAB MUKHERJEE: Sir, when the accidents take place only then the technical deficiency or whatever the deficiency is identified. So far as aircraft is concerned even before it takes off it is being inspected. If the technical defects were identified at that stage there was no question of taking it to the sky. Therefore, every time - and I can give the details but it will take time - a series of inspection lines are there from the very beginning.

Every time, whenever an aircraft flies and then lands, at every stage there are various processes of inspection to check whether the machine is ail right or whether there is any deficiency. So far as the deficiency in the equipment is concerned, whenever it takes place we just discuss with manufacturers, identify the defects and nowhere in any part of the world any manufacture can claim that they will manufacture an aircraft which will not develop snag in course of time. At the time of purchase there is no snag. These snags develop in course of time. Sometimes even in your personal experiences you will find when you enter into an aircraft, it cannot fly because the pilot informs that some snag has developed. These are common things.

SHRI DIPANKAR MUKHERJEE: Sir, I have to make only a point to supplement what Mr. Panda has said. So far as maintenance is concerned, I feel, even failure of components of systems and material failure or even system malfunctioning is a part of it. You may not call it a preventive maintenance. So, I would like to know from the hon. Minister, if these types of failures are coming under the head 'Technical Defect', whether a proper predictive maintenance being carried out or not. I would also like to know whether a predictive maintenance schedule is there, apart from preventive maintenance, because these failures would come under the maintenance failure, provided that predictive maintenance is also treated as a part of the maintenance.

SHRI PRANAB MUKHERJEE: Sir, I would not like to fall between the two experts and two engineers and divide these areas. But, what I can assure you is that generally these -- preventive and predictive - are taken care of.

Encouraging indigenous production of defence equipment

*63. SHRIMATI VANGA GEETHA: Will the Minister of DEFENCE be pleased to state:

(a) whether Government are laying stress on building a strong R&D base with accountability so that the development of defence equipment within the country is encouraged and dependence on foreign suppliers is minimized;

(b) if so, the details thereof;